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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,418	12/06/2001	Toshi Sonoda	FUJH 19.221	5476

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EXAMINER

SHAW, PELING ANDY

ART UNIT	PAPER NUMBER
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2144

DATE MAILED: 08/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/010,418

Applicant(s)

SONODA ET AL.

Examiner

Peling A. Shaw

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

PD

DETAILED ACTION

1. Amendment received on 06/01/2005 has been entered. Claims 1-2, 4, 7-8 and 10 are amended. Claims 1-12 are still pending.

Priority

2. This application claims a priority of JAPAN 2000-373247 on 12/07/2000. A certified copy of the foreign application is in the application.

Specification

3. The specification is amended with no new subject matter and accepted.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Bechtolsheim, et al.

(U.S. Patent Number 6,377,577), hereinafter referred as Bechtolsheim.

- a. Regarding claim 1, Bechtolsheim disclosed a packet transfer control method in which a transfer destination can be solved from header information of an IP packet, the method comprising the steps of: by means of hardware processing, finding, a first route information which has been address solved by a tree search using a destination

address contained in the header information of the IP packet (column 3, line 33-36: The routing element 110 processes each packet 130 to select one or more of the output interfaces 102 to which the packet 130 should be forwarded.; line 49-51: The access control element 120 is shown coupled to the routing element 110 to perform access control after a routing decision has been made.), and a second route information which has been solved by information, excluding the destination address, which specifies the IP packet (column 3, line 49-51: The access control element 120 is shown coupled to the routing element 110 to perform access control after a routing decision has been made.; column 4, line 5-13: In alternative embodiments, the packet label 200 may be any collection of information derived from the packet 130 (preferably from the packet header 133) used for access control.); and combining the first and the second route information to judge if the IP packet should be transferred to the execution of software (column 2, line 47-50: packet without need for software processing; column 3, line 49-51: The access control element 120 is shown coupled to the routing element 110 to perform access control after a routing decision has been made.; column 5, line 1-10: for software (rather than hardware) examination of the packet 130).

- b. Regarding claim 2, Bechtolsheim disclosed the Packet transfer control method according to claim 1, wherein the information, excluding the destination address, which specifies the IP packet includes packet header information of a source address, protocol type and port number at TCP/UDP, or identifying information to be given to a packet within an apparatus (column 4, line 5-13: source device, port identifier,

protocol type, In alternative embodiments, the packet label 200 may be any collection of information derived from the packet 130 (preferably from the packet header 133) used for access control.; column 5, line 16-20: precedence, tos).

- c. Regarding claim 3, Bechtolsheim disclosed the packet transfer control method according to claim 1, further comprising the steps of: giving individual band control conditions to each of the first (column 6, line 42-46, Fig. 3, 326: determine input permission) and the second route information (column 7, line 1-4, Fig. 3, 328: determine output permission); and combining the first and the second routes to determine a final band control (column 6: line 54-64, Fig. 3, 326: if the packet should be processed by high-level processor, if the packet should be dropped, column 7, line 15-25: if the packet should be processed by high-level processor, if the packet should be dropped).
- d. Regarding claim 4, Bechtolsheim disclosed a packet transfer control method in which a transfer destination is solved from header information of an IP packet, the method comprising the steps of: searching a destination by a tree search, with a destination parameter contained in the header information of the IP packet as a search condition (column 3, line 33-36: The routing element 110 processes each packet 130 to select one or more of the output interfaces 102 to which the packet 130 should be forwarded.; line 49-51: The access control element 120 is shown coupled to the routing element 110 to perform access control after a routing decision has been made.); searching specified flow data by use of a memory that is able to search by hardware whether the specified flow data is in data set for one input data (column 4,

line 34-36: The access control memory 210 includes a CAM (content-addressable memory) having a sequence of access control specifiers 211.), the specified flow data exchanging route information and information in a protocol that performs network management, from a plurality of parameters contained in the header information of the IP packet (column 3, line 49-51: The access control element 120 is shown coupled to the routing element 110 to perform access control after a routing decision has been made.; column 4, line 5-13: source device, port identifier, protocol type, In alternative embodiments, the packet label 200 may be any collection of information derived from the packet 130 (preferably from the packet header 133) used for access control.); and combining the destination searched by the tree search and the tree search and the specified flow data to judge if the IP packet should be transferred to the execution of software (column 2, line 47-50: packet without need for software processing; column 3, line 49-51: The access control element 120 is shown coupled to the routing element 110 to perform access control after a routing decision has been made.; column 5, line 1-10: for software (rather than hardware) examination of the packet 130).

- e. Regarding claim 5, Bechtolsheim disclosed the packet transfer control method according to claim 4, wherein the step of searching the specified flow data by use of the memory includes the steps of individually searching the contents of each parameter that can be masked, and searching by a plurality of times decoding conditions of each parameter that can be masked (column 4 line 34-38: The access control memory 210 includes a CAM (content-addressable memory) having a sequence of access control specifiers 211. Each access control specifier 211 includes

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a label match mask 212 and a label match pattern 213.), and searching by a plurality of times decoding conditions of each parameter that can be masked (column 6, line 42-46, column 7, line 1-4, Fig. 3, 326, 328: determine input permission, determine output permission).

- f. Regarding claim 6, Bechtolsheim disclosed the packet transfer control method according to claim 4, wherein the data set for one input data are configured to have data and a mask to determine an effective range on a data-to-data basis (column 4 line 34-38: The access control memory 210 includes a CAM (content-addressable memory) having a sequence of access control specifiers 211. Each access control specifier 211 includes a label match mask 212 and a label match pattern 213.) to determine an effective range on a data-to-data basis (column 5, line 49-53: A set of access control entries each provides the same selected permission for a range of selected source devices 131 S through T, and the range S through T can be represented as a smaller number of bit strings with unmatched bits.).
- g. Regarding claim 7, Bechtolsheim disclosed a packet transfer control system having an edge node (column 1, line 4-10: access control by router) connecting an access network and a core network, the edge node converting an IP packet into a core network address for each destination of the IP packet so that transfer through the core network can be made via an optimum route, the system comprising: means for, by hardware processing, finding a first route information which has been address solved by a tree search depending on a destination address contained in header information (column 3, line 33-36: The routing element 110 processes each packet 130 to select

one or more of the output interfaces 102 to which the packet 130 should be forwarded.; line 49-51: The access control element 120 is shown coupled to the routing element 110 to perform access control after a routing decision has been made.); means for finding second route information which has been solved by information, excluding a destination address, which specifies the IP packet (column 3, line 49-51: The access control element 120 is shown coupled to the routing element 110 to perform access control after a routing decision has been made.; column 4, line 5-13: In alternative embodiments, the packet label 200 may be any collection of information derived from the packet 130 (preferably from the packet header 133) used for access control.); and means for combining the first and the second route information to judge if the IP packet should be transferred to the execution of software (column 2, line 47-50: packet without need for software processing; column 3, line 49-51: The access control element 120 is shown coupled to the routing element 110 to perform access control after a routing decision has been made.; column 5, line 1-10: for software (rather than hardware) examination of the packet 130).

- h. Regarding claim 8, Bechtolsheim disclosed the packet transfer control system according to claim 7, wherein the information, excluding the destination address, which specifies the IP packet includes packet header information of a source address, protocol type and port number at TCP/UDP, or identifying information to be given to a packet within an apparatus (column 4, line 5-13: source device, port identifier, protocol type, In alternative embodiments, the packet label 200 may be any collection

of information derived from the packet 130 (preferably from the packet header 133) used for access control.; column 5, line 16-20: precedence, tos).

- i. Regarding claim 9, Bechtolsheim disclosed the packet transfer control system according to claim 8, further comprising: means for giving individual band control conditions to each of the first (column 6, line 42-46, Fig. 3, 326: determine input permission) and the second route information (column 7, line 1-4, Fig. 3, 328: determine output permission), the means combining the first and the second routes to determine a final band control (column 6: line 54-64, Fig. 3, 326: if the packet should be processed by high-level processor, if the packet should be dropped, column 7, line 15-25: if the packet should be processed by high-level processor, if the packet should be dropped).
- j. Regarding claim 10, Bechtolsheim disclosed a packet transfer control system having an edge node connecting an access network and a core network, the edge node (column 1, line 4-10: access control by router) converting an IP packet into a core network address for each destination of the packet so that transfer through the core network can be made via an optimum route, wherein the edge node comprises: means for searching a destination by a tree search, with a destination parameter contained in the header information of the IP packet as a search condition (column 3, line 33-36: The routing element 110 processes each packet 130 to select one or more of the output interfaces 102 to which the packet 130 should be forwarded.; line 49-51: The access control element 120 is shown coupled to the routing element 110 to perform access control after a routing decision has been made.); a memory (CAM: Content

Addressable Memory) for allowing a hardware search of whether to lie within data set for one input data (column 4, line 34-36: The access control memory 210 includes a CAM (content-addressable memory) having a sequence of access control specifiers 211.); means for searching, by use of the memory, a specified flow data exchanging route information and information in a protocol that performs network management, from a plurality of parameters contained in the header information of the IP packet (column 3, line 49-51: The access control element 120 is shown coupled to the routing element 110 to perform access control after a routing decision has been made.; column 4, line 5-13: source device, port identifier, protocol type, In alternative embodiments, the packet label 200 may be any collection of information derived from the packet 130 (preferably from the packet header 133; column 4, line 5-13: netflow switching); and means for combining the destination searched by the tree search and the specified flow data to judge if the IP packet should be transferred to the execution of software (column 2, line 47-50: packet without need for software processing; column 3, line 49-51: The access control element 120 is shown coupled to the routing element 110 to perform access control after a routing decision has been made.; column 5, line 1-10: for software (rather than hardware) examination of the packet 130).

- k. Regarding claim 11, Bechtolsheim disclosed the packet transfer control system according to claim 10, wherein the means for searching the specified flow data by use of the memory includes means for individually searching the contents of each parameter that can be masked (column 4 line 34-38: The access control memory 210

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includes a CAM (content-addressable memory) having a sequence of access control specifiers 211. Each access control specifier 211 includes a label match mask 212 and a label match pattern 213.), and means for searching by a plurality of times decoding conditions of each parameter that can be masked (column 6, line 42-46, column 7, line 1-4, Fig. 3, 326, 328: determine input permission, determine output permission).

1. Regarding claim 12, Bechtolsheim disclosed the packet transfer control system according to claim 10, wherein the data set for one input data are configured to have data and a mask (column 4 line 34-38: The access control memory 210 includes a CAM (content-addressable memory) having a sequence of access control specifiers 211. Each access control specifier 211 includes a label match mask 212 and a label match pattern 213.) to determine an effective range on a data-to-data basis (column 5, line 49-53: A set of access control entries each provides the same selected permission for a range of selected source devices 131 S through T, and the range S through T can be represented as a smaller number of bit strings with unmatched bits.).

Bechtolsheim disclosed all limitations of claims 1-6. Claims 1-6 are rejected under 35 U.S.C. 102(e).

Response to Arguments

5. Applicant's arguments filed on 03/15/2005 have been fully considered, but they are not persuasive.

6. In response to applicant's statement of "In contrast to applicant's claimed invention Bechtolsheim specifically recites in column 2, line 47 to 50 that there is no need for software processing.", Bechtolsheim merely suggests that it is the objective of the invention to use ACL to screen the packets for further processing as applicant has also recites in column 4, line 48-67 that three possible outcomes including routed to a output device, dropped or routed a "higher-level" processor. This routed to a "higher level" processor is the same as "transferred to the execution of software".

Remarks

7. The following pertaining arts are discovered and not used in this office action. Office reserves the right to use these arts in later actions.

- a. Hardwick et al. (US 5550816 A) Method and apparatus for virtual switching
- b. Bakke et al. (US 5566170 A) Method and apparatus for accelerated packet forwarding
- c. Roberts (US 6574195 B2) Micro-flow management
- d. Ross et al. (US 6658002 B1) Logical operation unit for packet processing
- e. Zabarski et al. (US 6711661 B1) Method and apparatus for performing hierarchical address translation

Conclusion

8. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to the enclosed PTO-892 for details.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peling A. Shaw whose telephone number is (571) 272-7968. The examiner can normally be reached on M-F 8:00 - 4:00.

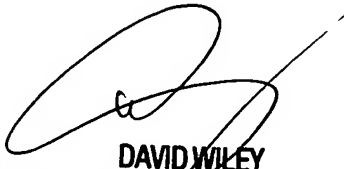
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

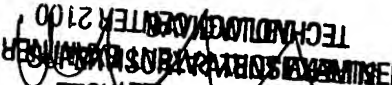
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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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